

# What We Eat in America: USDA Surveys Food Consumption Changes

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**T**he U.S. Department of Agriculture (USDA) has conducted food consumption surveys since the 1930's. These surveys provide an up-to-date picture of the dietary status of Americans, how much they are eating at home or away, and the degree to which they are meeting dietary recommendations. By comparing current survey estimates of food and nutrient intakes with those of previous surveys, researchers can identify changes in diet over time. Data from these surveys are used in administering a variety of public programs that affect the supply, safety, and distribution of the Nation's food. The data are also used to plan food assistance, health interventions, and educational programs.

Currently, USDA's Agricultural Research Service is conducting its tenth nationwide survey—the Continuing Survey of Food Intakes by Individuals (CSFII) 1994-96. Results from the first year of the CSFII 1994-96 have already provided new information on the dietary status of Americans and can be compared with a 1977-78 survey to look at changes over the past 17 years (see box on the survey).

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## Americans Are Eating More Grain Products...

Americans' food choices have changed since the 1977-78 survey (table 1). Americans are eating more grain products, especially grain mixtures, such as lasagna and pizza, as well as ready-to-eat cereals and grain-based snacks, like crackers, popcorn, pretzels, and corn chips.

Consumption of mixtures that are mainly meat, poultry, or fish (such as hamburgers, frozen dinners, and chili con carne) also increased, from 69 to 95 grams per day, while consumption of separate cuts of beef and pork, such as steaks and roasts,

decreased. Chicken eaten separately (not as part of a mixture) increased only slightly, up to 23 grams a day from 22 grams in the 1977-78 survey. Consumption of fish and shellfish eaten separately decreased from 11 to 9 grams.

Consumption of vegetables from all sources, including those used as ingredients in grain and meat mixtures, increased by about 3 percent. However, Americans did not eat enough of either dark-green vegetables (like spinach, romaine lettuce, and broccoli) or deep-yellow vegetables (such as carrots or sweet potatoes) in 1994. Americans ate an average of 18 grams of dark-green

## About the Survey

The Continuing Survey of Food Intakes by Individuals (CSFII) 1994-96, popularly referred to as "What We Eat in America," measures the kinds and amounts of foods eaten by Americans in response to 1990 legislation that requires continuous monitoring of the dietary status of the American population.

In each of the 3 survey years, a nationally representative sample of noninstitutionalized individuals residing in the United States is asked to provide, through personal interviews using a 24-hour dietary recall method, food intakes on 2 noncon-

secutive days. The numbers reported in this article are based on data from the first day. Respondents are also asked to provide health-related information, such as height and weight, and exercise, dieting, and smoking habits. Dietary information on 5,589 individuals of all ages was collected in CSFII 1994. Over the 3 years of the survey, more than 16,000 individuals will have responded.

More information on the CSFII, including data releases and publications, is available on the Internet at: <http://www.barc.usda.gov/bhnrc/foodsurvey/home.htm>

and/or deep-yellow vegetables a day—the equivalent of about a quarter serving of cooked carrots—much less than the recommended one to one-and-a-half daily servings.

The CSFII surveys also provide information on the percentage of individuals consuming specific foods. Overall, 83 percent of Americans ate some type of vegetable on any given day in 1994. One-fourth ate fried potatoes, including french fries or potato chips. However, only 9 percent ate a dark-green vegetable and only 13 percent ate a deep-yellow vegetable.

### ...And Drinking More Noncitrus Juices

Consumption of fruit and fruit juices increased by 20 percent. A large part of the increase was in noncitrus juices, many of which are mixed fruit juices with an apple or grape juice base. Over half of all Americans ate some type of fruit or drank fruit juice on any given day in 1994. Those who ate fruit ranged from 71 percent of both children 5 years of age and under and males 70 years of age and over to only 40 percent of males 20 to 29 years old.

Americans drank less whole milk and more lowfat and skim milk in 1994 than they did in 1977-78, with overall fluid milk consumption decreasing from 318 grams to 277 grams on any given day. The decrease in fluid milk intake was greater among children and teenagers than in older age groups. Fluid milk consumption went down by 15 percent among children 3 to 5 years old, by 24 percent among boys and by 32 percent among girls 6 to 11 years old, and by a third among both males and females 12 to 19 years old.

Table 1

#### Food Mixtures, Grain-Based Snacks, Noncitrus Juices, Soft Drinks, and Beer Showed the Biggest Increases in Consumption

Food Item	1977-78 average	1994 average	Change
	<i>Grams per day</i>	<i>Grams per day</i>	<i>Percent</i>
Grain products	215	300	+40
Mixtures	52	112	+115
Ready-to-eat cereals	10	16	+60
Crackers, popcorn, pretzels, corn chips	4	12	+200
Meat, poultry, and fish	207	195	-6
Mixtures	69	95	+38
Beef	52	24	-54
Pork	20	11	-45
Chicken	22	23	+4
Fish and shellfish	11	9	-18
Vegetables (from all sources)	232	239	+3
Fruits	142	171	+20
Citrus fruit and juices	65	70	+8
Noncitrus juices	13	29	+123
Milk products	318	277	-13
Whole milk	128	65	-49
2-percent or lower fat milk	63	123	+95
Milk desserts (puddings, ice cream)	21	27	+29
Eggs	27	17	-37
Beverages	633	930	+47
Fruit drinks and ades	50	84	+68
Carbonated soft drinks	144	326	+126
Low-calorie soft drinks	20	82	+310
Beer	42	101	+140

Source: USDA, Agricultural Research Service, Nationwide Food Consumption Surveys, 1977-78 and Continuing Survey of Food Intakes by Individuals, 1994.

The proportion of individuals drinking fluid milk on any given day dropped from 68 percent in 1977-78 to 56 percent in 1994. The biggest drop was for teenagers: male consumption dropped from 82 to 57 percent, and female consumption from 72 to 52 percent.

Children and teenagers may be drinking less milk because they are drinking more of other beverages, such as juices and soft drinks. For example, among children 5 years of age and under, consumption of noncitrus fruit juices increased by 308 percent between 1977-78 and 1994, carbonated soft drinks by 23 percent, and fruit drinks and ades by 36 percent. Consumption of citrus juices decreased by 8 percent among children 5 years of age and under.

In the same period, the proportion of individuals drinking carbonated soft drinks increased by 52 percent. Half of all Americans drank a carbonated soft drink on any given day in 1994, with the highest percentage increases among those 12 to 19 years of age (74 percent of males and 65 percent of females).

## Percentage of Calories From Fat Is Decreasing

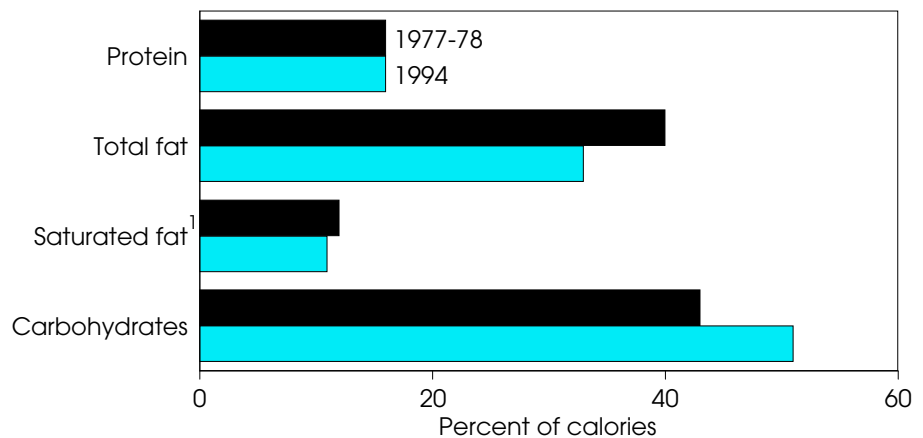
In 1977-78, individuals of all ages received 40 percent of their calories from total fat. This dropped to 34 percent according to a 1989-91 survey and to 33 percent in 1994 (fig. 1). Between 1977-78 and 1994, the con-

tribution of calories from carbohydrates rose from 43 to 51 percent. The contribution from protein remained constant at 16 percent.

The percentage of calories from saturated fat also decreased, from 12 to 11 percent between 1989-91 and 1994 (saturated fat was not examined in 1977-78). These shifts have

Figure 1

### Percentage of Calories From Fat Decreasing



Note: <sup>1</sup> Earlier time-period data on saturated fat are for 1989-91; data not available in 1977-78. Source: USDA, Agricultural Research Service, Nationwide Food Consumption Surveys.

Table 2

### Americans Generally Meet the 1989 Recommended Dietary Allowances (RDA'S)

Sex and age	Protein	Vitamin A (µg RE)	Vitamin E	Vitamin C	Thiamin	Riboflavin	Niacin
Percent of RDA							
Males and females: 5 years and under	271	182	115	233	167	203	149
Males:							
6-11 years	241	153	93	209	171	187	159
12-19 years	180	101	97	218	147	152	148
20 years and over	154	113	104	182	138	141	161
Females:							
6-11 years	212	118	90	214	145	160	135
12-19 years	149	111	85	175	133	139	125
20 years and over	126	118	88	147	121	123	131
All individuals	162	122	97	178	136	143	145

Note: µg RE = micrograms of retinol equivalents.

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been paralleled by an 8 milligram/deciliter decrease in the average serum total cholesterol level of adults between 1976-80 and 1988-91, as observed in surveys conducted by the Department of Health and Human Services.

Although fat as a percentage of calories was lower in 1994, only 29 percent of men and 35 percent of women 20 years of age and older consumed diets that provided 30 percent of calories or less from fat, as recommended in the 1995 *Dietary Guidelines for Americans*. A higher percentage, 34 percent of men and 41 percent of women, however, met the recommendation of consuming less than 10 percent of calories from saturated fat.

The CSFII survey shows that vitamin intake is relatively high among most age groups, but intake of certain minerals remains a problem (table 2). Average 1-day intakes for all age groups exceeded the Recommended Dietary Allowance (RDA) for protein, vitamin A, vitamin C, thiamin, riboflavin, niacin, folate, vitamin B-12, and phosphorus. Men also exceeded the RDA for vitamins

E and B-6, calcium, and iron. Average intakes above the RDA's do not mean that everyone consumes an adequate amount, nor do they tell how many people are meeting RDA's.

Although Americans can choose from a wide variety of foods, some diets have nutrient shortfalls. The farther average intakes fall below the RDA's, the greater the likelihood that some people have inadequate intakes. Males and females of all ages had average intakes below the RDA for zinc. Average intakes for women and teenage females were below the RDA for vitamin E, calcium, magnesium, and iron. Teenage males also were below the RDA for vitamin E, calcium, and magnesium. (Nutrient intake estimates do not include intakes from supplements.)

Individuals with intakes below the RDA do not necessarily have inadequate intakes, because the RDA's provide a safety factor and exceed the actual requirements of most individuals. However, as the percentage of the population with intakes below 100 percent of a given RDA increases, so does the likelihood that

some people are at nutritional risk. Only 21 percent of the women in the 1994 CSFII had diets that met the RDA for calcium, 22 percent for magnesium, and 17 percent for zinc.

## But Americans Are Getting Heavier

The average number of calories eaten per person was about 7 percent higher in 1994. Adults in the 1994 survey were on average about an inch taller and 11 to 12 pounds heavier than those in 1977-78. To compare the percentages of overweight adults between the two surveys, body mass indices were calculated from self-reported height and weight data. (Body mass index is calculated by dividing weight in kilograms by the square of height in meters. The cut-off points used to determine overweight were those defined in the *Healthy People 2000* national nutrition objectives: 27.3 for women and 27.8 for men.) In 1994, about 30 percent of adults could be classified as overweight, compared with about 20 percent in 1977-78.

Table 2--Continued

### Americans Generally Meet the 1989 Recommended Dietary Allowances (RDA'S)

Sex and age	Vitamin B-6	Folate	Vitamin B-12	Calcium	Phosphorus	Magnesium	Iron	Zinc
Percent of RDA								
Males and females: 5 years and under	132	337	475	104	124	204	125	80
Males:								
6-11 years	136	286	355	114	147	144	154	98
12-19 years	116	182	293	94	135	90	164	95
20 years and over	111	153	305	107	179	94	182	92
Females:								
6-11 years	110	237	270	102	133	128	124	88
12-19 years	104	141	206	67	96	78	91	85
20 years and over	93	123	213	75	120	82	98	75
All individuals	107	169	281	92	142	102	136	85

Source: USDA, Agricultural Research Service, Continuing Survey of Food Intakes by Individuals, 1994.

Physical activity is an important contributor to weight status, and a low level of physical activity may contribute to the observed increase in overweight Americans. In the 1994 CSFII, respondents were asked, "How often do you exercise vigorously enough to work up a sweat?" Thirty percent of men and 45 percent of women answered "rarely" or "never." Respondents also were asked, "How many hours did you watch television or videotapes yesterday?" For both men and women, the median number of hours was between 1 and 2 hours. The Dietary Guidelines recommend that healthy Americans spend 30 minutes or more on moderate physical activity on most—preferably all—days of the week. Moderate physical activity can be anything from general cleaning or gardening to walking briskly or swimming.

## Breakfast's Popularity Stays Steady, Snacking Increases

The percentage of Americans who ate breakfast stayed about the same in 1994 as in 1977-78 at 85 percent and 86 percent, respectively. There was no change in the contribution from breakfast to total intake of food energy and fat between the two survey periods. The breakfast contribution varied only slightly for food energy and fat, at 18 and 16 percent, respectively.

Snacking went up; the percentage of individuals eating snacks increased by one-fourth, from 60 percent to 75 percent. Snacking increased by 35 percent among females 6 to 11 years old and by 31 percent among children 3 to 5 years old and males 12 to 19 years old. Snacks provided 17 percent of food energy in 1994 compared with 11 percent in 1977-78. In 1994, snacks provided 21 percent of food energy for young children and teenage

males, and 22 percent for teenage females.

## More Americans Are Eating Foods Away From Home...

Americans ate away from home more in 1994. And this does not include foods (such as pizza) that are delivered to the house or takeout food eaten at home. Young children and adult women shared the largest increase in eating away from home, reflecting the increasing numbers of women working outside the home and children in daycare. In 1977-78, 43 percent of Americans ate away from home at least once in a day (fig. 2). By 1994, this percentage increased by nearly a third, to 56 percent. Over a quarter of Americans' energy and fat intakes came from foods away from home, up from 18 percent in 1977-78.

One of the biggest changes has been food eaten away from home that is purchased from retail stores,

reflecting the increase in deli and other prepared food items now available in grocery and convenience stores. In 1977-78, no more than 3 percent of foods eaten away from home came from stores. By 1994, this figure ranged from 8 percent for children 6 to 19 years old to 15 percent for adult males.

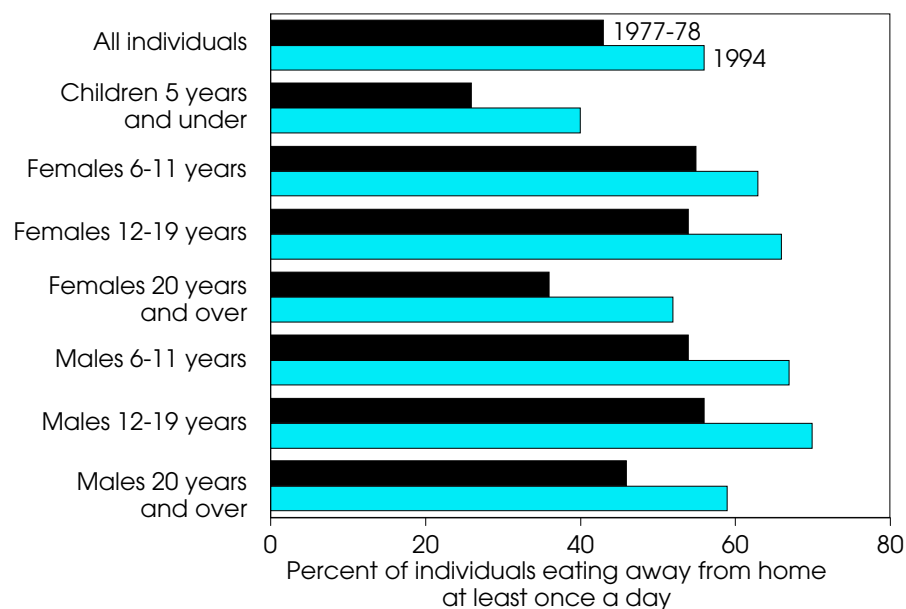
## ...Especially Children

Forty percent of children 5 and under ate away from home at least once a day in 1994, up from 26 percent in 1977-78. The percentage jumps to two-thirds for children 6 to 11 years of age and for teenage females, and 70 percent for teenage males. Foods eaten away from home provided, on average, one-quarter of total calories for 6- to 11-year-olds and one-third for 12- to 19-year-olds.

Between the two survey periods, the proportion of food from fast-food establishments increased by 14 percent for children 5 years old and under and by 166 percent for males 6 to 19 years old. Males 6 to 19 years

Figure 2

### More Americans Are Eating Away From Home



Source: USDA, Agricultural Research Service, Nationwide Food Consumption Surveys.

old ate 28 percent of foods consumed away from home at a fast-food establishment in 1994, compared with 11 percent in 1977-78. Again, this does not measure foods bought from fast-food establishments and taken home.

Although Americans' diets are improving, they are not meeting many dietary recommendations. Fat as a percentage of total calories continues to decrease, but more Americans are overweight. USDA's food consumption surveys will continue to provide critical information for tracking the diets of Americans over time.

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